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10/550,974

09/26/2005

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EXAMINER

LY, HIEN QUANG

ART UNIT

PAPER NUMBER

3662

MAIL DATE

DELIVERY MODE

07/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/550,974

Applicant(s)

KORNBICHLER ET AL.

Examiner

Hien Ly

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 13-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. Germany 103 14 557.5.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 09/26/2005.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims **13-19, 23-25, and 29-33** are rejected under 35 U.S.C. 102(b) as being participated by **McEwan ('6,373,428)**.

Regarding **claims 13, 23, and 32**, McEwan discloses:

- A transmitter for sending a transmission signal. See FIG.1 (" a transmitter 14"). Column 3, line 39-40.
- A receiver to receive a reflection signal. See FIG.1 (" a receiver 20"). Column 3, line 44-46.
- A receiving oscillator with a transient response influenced by the reflection signal. See FIG.1 (" oscillator 22"). Column 3, line 67 and column 4, line 39-46 (" the detected RX pulses").

Regarding **claim 14**, McEwan discloses at least one of a build-up time of receiving oscillator influenced by the reflection signal. See column 5, line 36-39.

McEwan also inherently teaches an average delivered power of receiving oscillator influenced by the reflection signal. See FIG. 2b. Column 5, line 16-25.

An average power of the oscillator is well known to one skilled in the art that it is measured by using the formula:  $P_{ave} = E_{pulse} / T$  or  $E_{pulse} * F$ .

Regarding **claim 15**, McEwan inherently teaches that a power of receiving oscillator can be measured as previously discussed.

Regarding **claim 16**, McEwan discloses means for switching the receiving oscillator on and off. See FIG. 2a ("switch 44"). See column 4, line 49-51.

Regarding **claim 17**, McEwan discloses the switching means configured to switch receiving oscillator periodically following a clock rate. See column 5, line 8-14.

Regarding **claim 18**, McEwan disclose that the receiving oscillator is also a transmitting oscillator for generating the transmission signal. See column 3, line 66-67 and column 4, line 1-8.

Regarding **claim 19**, McEwan discloses a transmitting oscillator for generating the transmission signal. See FIG. 1 ("TX clock oscillator 12"). Column 3, line 66-67.

Regarding **claim 33**, McEwan inherently teaches the measurement method to measure a distance of the target. Column 1, line 55-60.

Regarding claims **24-25, 29-31**, McEwan discloses a pulsed transmitter radar, in combination with a motor vehicle, a building, and an industrial plant. See FIG.1 ("drawing description"). Column 2, line 63-67 and column 3, line 1-5.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **20-22 and 26-28** are rejected under 35 U.S.C. 103(a) as being obvious over **McEwan** as applied to claim **13** above, and further in view of **McCorkle ('2002/0064245)**.

Regarding **claims 20 and 26**, McEwan fails to disclose a mixer configured to add together first and second measurement sub-signals.

However, McCorkle successfully discloses a mixer configured to add together first and second measurement sub-signals. See FIG. 5 ("a main mixer 555 and an error mixer 560"). Page 3, paragraph 0027 and page 7, paragraph 0097.

Regarding **claims 21-22 and 27-28**, McEwan fails to disclose a mixer having a mixer with two diodes connected with same polarities to sum two measure sub-signals and a mixer with two diodes connected with opposite polarities to subtract two measure sub-signals.

However, McCorkle successfully discloses a mixer having a mixer with two diodes connected with same polarities to sum two measure sub-signals and a mixer with two diodes connected with opposite polarities to subtract two measure sub-signals.

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See FIG. 5 ("a main mixer 555 and an error mixer 560"). Page 3, paragraph 0027 and page 7, paragraph 0097.

It would have been obvious to modify McEwan to include a mixer to combine two measurement sub-signals in teaching of McCorkle in order to efficiently reduce performance degradation as a result of self generated noise.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Ly whose telephone number is 571-270-1326. The examiner can normally be reached on M-F: 7:00am - 4:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THOMAS H. TARCZA can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner



Hien Ly

June 29, 2007



THOMAS H. TARCZA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600